

Received

20. Dez. 2001

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

To:

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SUISSE

Frist: **NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

(PCT Rule 72.2)

Date of mailing (day/month/year) 13 December 2001 (13.12.01)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference P 14 939 PC	
International application No. PCT/CH00/00268	International filing date (day/month/year) 16 May 2000 (16.05.00)
Applicant PAUL SCHERRER INSTITUT et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

JP,US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

EP

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

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Translation

PATENT COOPERATION TREATY

PCT

3

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P 14 939 PC	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CH00/00268	International filing date (day/month/year) 16 May 2000 (16.05.00)	Priority date (day/month/year) 14 June 1999 (14.06.99)
International Patent Classification (IPC) or national classification and IPC G21F 9/30		
Applicant PAUL SCHERRER INSTITUT		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 7 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 02 January 2001 (02.01.01)	Date of completion of this report 24 July 2001 (24.07.2001)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH00/00268

## I. Basis of the report

1. This report has been drawn on the basis of (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

- ☐ the international application as originally filed.
- ☒ the description, pages 1,3,5-10,12, as originally filed,  
 pages \_\_\_\_\_, filed with the demand,  
 pages 2,2a,4,11, filed with the letter of 09 June 2001 (09.06.2001),  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_.
- ☒ the claims, Nos. \_\_\_\_\_, as originally filed,  
 Nos. \_\_\_\_\_, as amended under Article 19,  
 Nos. \_\_\_\_\_, filed with the demand,  
 Nos. 1-10, filed with the letter of 09 June 2001 (09.06.2001),  
 Nos. 11-15, filed with the letter of 09 July 2001 (09.07.2001).
- ☒ the drawings, sheets/fig 1/5-5/5, as originally filed,  
 sheets/fig \_\_\_\_\_, filed with the demand,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_,  
 sheets/fig \_\_\_\_\_, filed with the letter of \_\_\_\_\_.

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

4. Additional observations, if necessary:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/CH 00/00268

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-11, 12, 13, 14, 15	YES
	Claims		NO
Inventive step (IS)	Claims	1-11, 12, 13, 14, 15	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-15	YES
	Claims		NO

### 2. Citations and explanations

This report makes reference to the following documents:

D01: EP-A-0 156 001, which corresponds to US-A-4 652 404

D02: WO-A-98/54107 and

D03: DE-A-31 31 798

(mentioned in the application);

D1: GB-A-2 047 946

D2: EP-A-0 036 999 and

D3: US-A-4 5 362 771.

#### 1. Novelty

##### 1.1 Prior art

The applicant proceeds from a prior art (see the description, page 2, lines 14-22) which cannot be easily deduced from any of the available documents but which can be regarded as a realistic prior art, in view of the following documents:

- D01, which discloses a process for the disposal of radioactive materials (see the short abstract; the description, page 1 - page 4, line 24, and Claims 1-3) (cf. page 1, lines 28-31, of the present description);
- D1, which discloses a method for the disposal of radioactive materials (see the short abstract; the

description, page 1, lines 43-54; page 2 and the claims);

- D02, which discloses a method for the disposal of hazardous materials, such as radioactive materials (method of encapsulating hazardous waste materials...as radioactive materials) (see the short abstract; the description, page 1, line 25 - page 2, line 24; page 5, line 9 - page 6, line 6; page 15, line 28 - page 19, line 10; and Claims 1, 5, 8) (see the present description, page 1, line 32 - page 2, line 2); and
- D03, which discloses a method for the disposal of radioactive materials (see Figures 1 and 2; the short abstract; the description, page 3, paragraph 1 - page 4, line 8; paragraphs 3 and 4; page 5, paragraphs 2 and 3; and the claims) (see the present description, page 2, lines 9-13).

See also the applicant's response of 6 June 2001 (annex A) to the first written opinion and the amendment spontaneously submitted on 17 January 2001 (annex B), possibly containing an objective and relevant evaluation of the documents cited in the first written opinion and of the documents cited in the international search report and classified as "X" documents, that is to say "prejudicial to novelty" or at least "prejudicial to inventive step", with regard to certain originally submitted claims, and which actually mention at least neither of the two central features that are essential for the invention (see the characterising features, lines 7-12, of the present Claim 1) according to the present application.

1.2 In view of the applicant's opinion, the subject matter of Claim 1 differs from that realistic prior art by the characterising features (lines 7-12 of Claim 1).

1.3 Consequently, the subject matter of independent Claims

1, 12, 13 and 15, and the subject matter of Claims 2-11, which are directly or indirectly dependent on Claim 1, as well as the subject matter of Claim 14 in connection with Claim 13, are novel (PCT Article 33(2)).

## 2. Inventive step (problem-solution approach)

### 2.1 Problem addressed and objective task

Regarding the problem addressed, see page 2, lines 17-22, of the description.

The present application is considered to address the objective task of improving disposal, in particular of hazardous substances or waste such as radioactive waste and radioactive graphite (see page 2, lines 23-28, of the description).

### 2.2 Solution

The solution is characterised by the subject matter of independent Claims 1, 12, 13 and 15, and in particular, with regard to the subject matter of the method Claim 1, by the features in lines 7-12 of Claim 1.

### 2.3 Reasoned statement

2.3.1 The problem addressed by the application is not indicated by the available documents.

2.3.2 Moreover, the subject matter of independent Claims 1, 12, 13 and 15 is not suggested to a person skilled in the art by the teaching of the available documents, either alone or in any combination (see the applicant's objective analysis in annex A of the documents cited in the first written opinion and in annex B of the international search

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/CH 00/00268

report citations), because the two features that are essential for the invention (see the characterising features, lines 7-12 of the present Claim 1) of the present application are not obvious from the teaching of the available documents, even when two or more of them are combined.

2.4 The subject matter of independent Claims 1, 12, 13 and 15, and the subject matter of the product Claim 14, which is dependent on Claim 13, therefore involve an inventive step (PCT Article 33(3)).

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/CH 00/00268

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Contrary to PCT Rule 5.1(a)(iii), the description is not in line with the product claims.
2. [German text only] In Claim 1, line 4, a typing error should be corrected so that the text reads "Zuschlagstoffmischung...".
3. The present independent Claim 13, which nevertheless refers back to independent Claim 12, comprises redundant features (see lines 16-20, "as well as a casting or mortar recipe as casting mortar matrix...", which is the casting compound or is similar to the casting compound) which are or appear to be superfluous.

### Additional observation under PCT Article 34(2)(b)

The present/valid process Claim 1 results from the combination of the original process Claims 1 and 2 and therefore meets the requirement of PCT Article 34(2)(b) (see Annex A, page 3, point 2).

The present product Claims 13-15 result from necessary editing aimed at clarifying these claims in connection with product Claim 12 and suggested by the examiner to the applicant during a telephone conversation of 5 July 2001 (see the response to the telephone conversation of 5 July 2001 in annex C, page 1, paragraphs 3-5). These amendments represent a restriction rather than an extension of the subject matter of Claims 13-15.

The subject matter of Claims 13-15 therefore meets the requirement of PCT Article 34(2)(b).